

New Claims

1. An anti-skid spike (1) which can be inserted into an embedding opening in a tread surface (50), for example of a tire, having an insertion element (30) made of a hard alloy and a base body (10) with a flange (13) and an opening (14) the insertion element (30), wherein the insertion element (30) inserted into the base body (10) protrudes past the base body (10),

characterized in that

the base body (10) forms a receiver section (11), which extends at least partially around the recess (14) in the base body (10), and

that a sleeve element (20) is applied on the receiver section (11), which fixes the insertion element (30) inserted into the recess (14) of the base body (10) in it in a positive and non-positive manner.

2. The anti-skid spike (1) in accordance with claim 1,

characterized in that

in the assembled state the insertion element (30) projects past the sleeve.

3. The anti-skid spike (1) in accordance with claims 1 or 2,

characterized in that

the insertion element (30) has a cone-shaped section (33) which, in the assembled state, engages a corresponding recess (14) in the base body (10), and that a positive or non-positive connection between the sleeve element (20) and the receiver section (11) of the base body is formed (10).

4. The anti-skid spike (1) in accordance with one of claims 1 to 3, characterized in that

the sleeve element (20) of a material of lesser wear resistance in comparison with the insertion element (30).

5. The anti-skid spike (1) in accordance with one of claims 1 to 4, characterized in that

the base body (10) is made of a material which is less wear-resistant in comparison with the insertion element (30) and the sleeve element (20).

6. The anti-skid spike (1) in accordance with one of claims 1 to 5, characterized in that

the sleeve element (20) is embodied as a closed ring resting on the entire surface of the receiver section (11) of the base body (10), as a ring partially resting in segments on it, or as a clamping sleeve in the form of a slit ring.

7. The anti-skid spike (1) in accordance with one of claims 1 to 6, characterized in that

the sleeve element (20) has a bezel (21, 22) at one or both of its ends on the longitudinal side, which encircles it at least partially.

8. The anti-skid spike (1) in accordance with one of claims 1 to 6, characterized in that the sleeve element (20) is constructed to be rotationally symmetrical.

9. The anti-skid spike (1) in accordance with one of claims 1 to 8, characterized in that the base body (10) has an flange (13) formed on it, and the diameter of the sleeve element (20) is greater than the diameter of the flange (13) of the base body (10).

10. The anti-skid spike (1) in accordance with one of claims 1 to 9, characterized in that the receiver section (11) of the base body (10) and the passage (23) in the sleeve element (20) corresponding to it are designed to be cylindrical.

11. The anti-skid spike (1) in accordance with one of claims 1 to 9, characterized in that the receiver section (11) of the base body (10) and the passage (23) in the sleeve element (20) corresponding to it are designed to be in the form of a truncated cone.

12. The anti-skid spike (1) in accordance with one of claims 1 to 9, characterized in that

the receiver section (11) of the base body (10) is designed to be cylindrical, and the corresponding passage (23) of the sleeve element (20) in the form of a truncated cone.

13. The anti-skid spike (1) in accordance with one of claims 1 to 9, characterized in that

the receiver section (11) of the base body (10) initially has a section (17) in the shape of a truncated cone and a cylindrical section (18) following it, wherein the passage (23) in the sleeve element (20) has an area which corresponds to the truncated cone-shaped section (17) of the receiver section (11), which is followed by a conically widened expansion depression (25).

14. The anti-skid spike (1) in accordance with one of claims 1 to 13, characterized in that

a detent (12) in the form of a protrusion is provided between the receiver section (11) and the flange (13) of the base body (10).

15. The anti-skid spike (1) in accordance with one of claims 1 to 14, characterized in that

the receiver section (11) of the base body (10) has a snap-in element (15),

which in the assembled state engages a snap-in receiver (24) of the sleeve element (20).

16. The anti-skid spike (1) in accordance with one of claims 1 to 15, characterized in that

the receiver section (11) of the base body (10) has a snap-in element (15) and at least one slit-shaped recess (16) in the longitudinal direction of the receiver section (11), and that in the assembled state the snap-in element (15) engages a snap-in receiver (24) of the sleeve element (20).

17. The anti-skid spike (1) in accordance with one of claims 1 to 16, characterized in that

the sleeve element (20) is designed as a multi-part element, and has at least one further ring sleeve element (40).

18. The anti-skid spike (1) in accordance with one of claims 1 to 17, characterized in that

the sleeve element (20) has a radially outward protruding flange (26) and/or

that the base body (10) has at least one further flange (13).

19. The anti-skid spike (1) in accordance with one of claims 1 to 18, characterized in that

in the assembled state the insertion element (30) is set back in respect to

the sleeve element (20), and the sleeve element (20) protrudes in respect to the tread surface (50).